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The Industrial Nurse's Field and Education

—A Point of View—

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THERE is no question in my mind that the agencies representing public health, either in an active department, in a public health nursing school, or in the public health departments of medical schools have an interest in industrial medicine and industrial nursing. There has been, unfortunately, a presumption on the part of public health groups that, because they have an interest, this interest is necessarily a controlling interest. The basis on which industrial medicine and industrial nursing have been founded has been individual treatment for industrial accidents and occupational diseases. Out of this close contact with employed individuals has grown a secondary useful service loosely described as "Public Health." There is a public health phase to industrial medicine. Were individual care to be abandoned, however, and only the public health phase practiced, few industrial physicians or nurses could justify their existence.

The existence of both the industrial physician and the industrial nurse was justified for many years without, generally speaking, any conscious practice of public health. It is really only in the last few years that public health groups have made a concerted effort to emphasize their phase in industrial medicine. They began to do so after 30 years of successful industrial medicine and nursing with demands for doctors and nurses constantly growing over this period.

During these many years industrial nurses were isolated. Recently they have been forming groups for their mutual advantage and have been exchanging ideas. These groups have been of three types: (A) under the auspices of public Health Nurses; (B) as a branch of the State Nurses Association, and (C) as an individual group. Each of these types has had its advantages and disadvantages.

The Public Health group has had the advantage of a nation-wide organization with educational facilities, lecture facilities, and periodicals with the ability to disseminate information advantageously to all concerned. Unfortunately, the disadvantage has been in the antagonism aroused among industrial nurses by the assumption that, because industrial nursing had public health phases, industrial nurses were, therefore, Public Health nurses, and that the idealologies, teachings, and practices of public health nursing should be accepted as the alpha and omega of all that an industrial nurse should know. Many a public health nurse has unconsciously and yet flagrantly antagonized an audience of industrial nurses with her flat statement that "We are all public health nurses." The statement has been made in the best of faith, but its naivete has not prevented outraged feelings.

These are statements based on actual knowledge and experience on my part. I am reporting them as observations. It is my belief that this effect could be avoided and that dissension is unnecessary.

The second type of organization, that under the State Nurses Association, has also the advantage of a strong maternal affiliation. There may be a tendency to confine its activity to a state area or to subject its industrial nursing membership to a struggle to keep the industrial phase of their activity emphasized and not have it submerged completely by the overall generalized objectives of the Nursing Association. Furthermore it is difficult to introduce the legitimate justified amount of public health to their activity through the State Nursing Association. These factors slow up the progress of the development of a complete industrial nursing program but do not arouse the frictions referred to under the public health group. The proper management of an industrial nurses' section and the opportunity to develop their own type of program including affiliation with other state groups can overcome these difficulties.

The independent group have the advantage of being homogeneous in their interests and their objectives. This identity of interest, however, limits their opportunities and exposure to either the public health phases or the generalized nursing phases of their problems. As an organization they are likely to be strong because of their mutual interest and enthusiasm. Where they call freely on the educational facilities of other agencies or take advantage of group sessions they can develop a well balanced program.

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It would be interesting to take the entries on the daybook of an average industrial nurse in an average busy industrial establishment and analyze the number and types of patients. From my own experience I would suggest that a nurse could be easily found who handles between 60 and 80 patients a day. Twenty to 50 of these will be industrial accident cases entered as first treatments or revisits. The remaining number will be those who report non-occupational diseases, injuries, or maladjustments. Of these many will require the ordinary everyday type of office treatment or advice which is rendered by the individual practitioner of medicine. A few will need and obtain health advice. This advice is given on a personal basis. Collectively these cases may be reported and described under the term "Public Health, Health Education." As a matter of fact, I suggest we re-evaluate this use of the phrase "health education" because it is not so much the mass education of public health as it is "health advice" as it is disseminated through private individual practitioners.

There are, of course, activities which do constitute public health practice in an industrial establishment. When a qualified public health individual discusses these problems the industrial nurse is quick to mark, learn, and inwardly digest the offering. When the public health individual displays an understanding of the industrial nurse's innumerable other daily duties which cannot be described as public health activities, except through distortion, she will listen with more respect than ever.

The need for education from various sources has been extremely well covered in many papers. Education must come from general medical, general surgical, hospital nursing, and general nursing, and from public health sources.

Each group has its place and its function. The field of industrial nursing is too broad for any group to adopt it as its own and only as its own. Industrial nursing is and will remain a specialized field of nursing exercising its own prerogatives. Among those prerogatives will be the choice to accept education from whatever source it feels has something of value to offer. No group today can offer the complete curriculum unless it be a university and then only if it offers the facilities of several branches of the medical school, the facilities of the nursing school, and the facilities of its public health department, either in the medical or nursing school, or both.

It is perfectly legitimate for one branch of the university to foster the educational program but it must do so on a cooperative basis with other branches. Viewed in this way, I believe, it is fruitless to discuss to which branch of the university the teaching of industrial nursing belongs. In various universities one or another department may be best able to work the course into its curriculum. This is a matter of local expediency. It is not one of policy, to become a general issue.

To return to my original description of the difficulties encountered by the public health fostering of industrial nurses, I believe these difficulties can be readily smoothed out. They will disappear, in my opinion, when public health groups say, "You have, as an industrial nurse, a number of public health problems; in these we are interested and can offer you assistance with them. You have many more problems which are not public health. These we will attempt to understand, and hope to bring to you, through the machinery of our organization, those whom you can respect as authorities, and who may offer you assistance on these problems peculiar to your specialty of the nursing profession, "Industrial Nursing'."

The Nurse's Part in the Physical Examination Program

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IT IS NOT particularly surprising that there has been a change of recent origin in the part the nurse plays in a physical examination program. This change has been most noticeable during the present international disagréement. Nor is this surprising since, after all, most of our recent changes have been to some extent influenced by the war. Quite true this change has been unusually revolutionary in its scope and, having gained momentum in its downgrade rush, has carried over into the area traversed by the foolhardy that hurry in where the angels judiciously and fearfully detour. And I do not mean to imply that we have any angels among us, professionally speaking at least.

The changes in status have, in certain instances, not been simply those of privileging ourselves to use the nurse increasingly in the simple mechanics of the examinations, but in the interpretation of findings as well. And therein resides the termite in the housing project. We have on the one hand the academic approach which in extremis forbids the nurse doing more than to act as a clerk in so far as the actual examination is concerned, or perhaps occupy the role of chaperon in the instance of a male examiner and female examinee. On the other hand we have the euphoric self-styled practicalists who sponsor anything that seems to work, accepting any means to an end. This end is most graphically seen where the examinees are men and male nurses function as the examiners—the excuses being lack of available physicians; physician's time too valuable; a physician is called in to check all abnormalities; the nurse does as good a job as a physician, etc. Taking these apart in order: There is no question that there is for the present a considerable lack of competent available physicians which is, in reality, only a challenge to use in the manner of utmost efficiency the time of those we do have. It does not require any great amount of initiative to set up a procedure and lay out so that one physician, assisted by two or three nurses, can without difficulty examine 100 or more mixed examinees in an ordinary working day. The quality of this examination can be far better than today's average and is completely adequate for today's needs. Not that we are forgetting the proved economic, as well as intangible and humanitarian, benefits which result from complete pre-employment and periodic physical examinations. We have simply substituted a streamlined means of examining which is necessary for the duration, yet contains the essentials found apropos in our peacetime activities. Even at the current raté of need it would appear that examinations done at this pace would compare favorably with values received for time and energy expended by our otherwise too valuable physicians in any other endeavor, whatever it may be. It is likewise quite true that the nurse can call for the physician to double check any of the obvious abnormalities detected. But what of the borderline or hidden cases in which the training, experience and astutness of a high class physician are often taxed to detect and interpret, and in which for the same reason the nurse stands likely to miss the entire syndrome? Certainly his or

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her training and experience are not such that they can be expected to display such achievement. And these are the very cases which have in many instances shifted the scale to a proved economic advantage to industry of a physical examination program. No matter how willing and well meaning the nurses may be to accept it, we are not playing the game fairly when we thrust such responsibilities on their so insufficient shoulders. As for the physician who avows that the nurse does as good a job as a physician, even if he says it with his tongue in his cheek for purposes of economic gain or through personal lassitude, he certainly does not speak well for himself or his training. Those of us most directly connected with industry have long since learned to stay on the beam, stay in the middle of the road, so to speak, in such matters. It is economic wisdom to place responsibilities with responsible people.

MUCH of the effectiveness in creating the desired impression upon the incoming applicant and in determining his decorum as a worthwhile employee is effected by letting him know that his employer thinks enough of him to provide for him in many ways, and the first example he meets is the dignity and care and consideration at the time of the pre-employment examination. Thus he will carry the memory of his reception in the medical department as the representative attitude of the company with which he is affiliating himself. Dividends of many types are to be expected if these impressions are what they should be. They may be minimized by any apparent lack of attention, such as that of an examination without a physician.

In these days of war there is a perfectly natural coincidence lending material aid to the cause for the use of nurses in the physical examination program. Most of our nurses are female and our present great influx of workers in industry is female too. Our problems are thus greatly minimized in their inception. Another important factor in facilitating a maximum number of reasonably complete examinations in the minimum time possible, and thus the most efficient modus operandi, is that of the physical layout of the examination and dressing rooms used in the work and the correlation with the various steps of the examination per se. If either a large number of examinations is to be done routinely, or if the examinations are done on both sexes, it is almost a must that two examination rooms be used. Each examination room should have two dressing rooms attached, each dressing room having a door opening into the examination room proper and another door opening into the exit hall. In addition, these dressing rooms should contain facilities for obtaining urine samples as well as for undressing and dressing, with hooks for clothing, a place to sit while waiting, a mirror, etc. Each examining room should have doors permitting the coming and going of the physicians and nurses without going through the dressing rooms.

PERHAPS as the best way to bring out just what our conception of the part a nurse takes in a modern, comprehensive physical examination program, in which there is a maximum utilization of time and ability, with a minimum of waste of skills and the vestment of responsibilities only in those truly responsible, a general outline of procedures is in order. For convenience we will suppose the examinee is feminine and enters the examination routine fresh from her interviews in the employment department. After her name is recorded, she is given a preliminary eye test—preferably by the orthorater, which has been selected for its speed and efficiency and is operated by a lay technician. A nurse then records the age, sex, address, marital state, color, number of children and their ages, etc., including a careful history of serious illnesses and injuries, operations, menstruation, admitted defects, deformities or weaknesses, previous occupations, and the position sought now. If these findings are to be of full value, accurate and complete at least to the point of practicability, the nurse must not only have a general knowledge of such procedures, coupled with more than a little tact and friendliness, but a special knowledge as well in the art of developing the loose ends of a too often reluctant history into a lucid revelation of conditions past and present which may materially influence the attitude of the physician in classifying the examinee and in placement recommendations. The examinee is then escorted to a dressing room where she changes to an examination gown. While awaiting her examination a urine sample is obtained, and blood pressure, temperature, pulse, and hearing records are taken by the nurse. During the examination the nurse records the findings as dictated by the examining physician. Additional laboratory tests if indicated are then made before the examinee is allowed to dress in street clothes. These include such tests as blood tests of one type or another, as well as x-ray, etc. In many instances the laboratory technician is a nurse who if not too busy may function in addition as one of the nurses helping in the examination routine.

As the need or indication arises, the nurse in the same manner may enlarge her activities to include more detailed histories, such as vaccination, family history, etc., being limited only by the degree of exhaustiveness the director of the examinations sees fit to request.

IN SUMMARIZING let me call attention to the fact that, although the scope of the nurses activities has been broadened immensely, it has not put her in a position of rendering opinions. She has made certain technical and factual records, largely a mechanical activity, but in no way an unimportant or to be neglected procedure, which in itself calls for her very best in tact and diplomacy as well as her training and experience. The interpretation and analysis of these findings are still left to the physician who is, in the final analysis, in the logical position to accept the responsibility for presenting the official opinion and in the making of recommendations as regards placement, need for care, etc.

There is every reason to suppose that this rationalized concept of the part of the nurse in a physical examination program will continue after the present urgencies have subsided to normalcy once more.

Legal Responsibilities and Limitations of Nurses and Lay Personnel

THE duties and responsibilities of nurses and lay personnel employed to assist in the operation of the industrial health programs of various industries vary because of the differing occupational needs and health requirements of workers.

The question as to just what are the legal responsibilities and limitations of nurses and lay personnel engaging in industrial medical programs has become increasingly important under wartime conditions, which have made it necessary for industry to conserve medical manpower by employing more nurses and a greater number of non-professional personnel.

The legal and professional angles of the question were anlyzed several years ago by the Council of the Ohio State Medical Association. The following statement of policy adopted by

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the Council with respect to the activities of nurses and lay personnel employed by industrial and mercantile establishments is recommended as a guide:

"In the opinion of the Council, the practice of medicine by nurses and others, who have no legal right to do so, should be discontinued for the following reasons:

1. Sick or injured workmen are entitled to efficient, competent medical care which cannot be provided by those possessing limited scientific knowledge and medical training—even by a registered nurse.

2. The practice of medicine by a person who does not hold a certificate from the State Medical Board entitling him or her to do so, is unlawful (Section 12694, G.C.) and therefore against sound public policy.

3. As set forth in Sections 1286 and 1287, G.C., a person is regarded as practicing medicine 'who examines or diagnoses for a fee or compensation of any kind, or prescribes, advises, recommends, administers or dispenses for a fee or compensation of any kind, direct or indirect, a drug or medicine, appliance, application, operation or treatment of whatever nature for the cure or relief of a wound . . . injury . . . or disease,' excepting 'service in the case of emergency or domestic administration of family remedies.' Therefore, before a person, specifically a registered nurse, may legally render services enumerated above, unless such services come within the purview of 'service in the case of emergency,' he or she must hold a certificate issued by the State Medical Board granting him or her the legal right to practice medicine and surgery.

4. The term 'emergency' as used in Section 1287, G.C., has been defined by the Attorney General of Ohio to 'include such cases of sudden and unexpected illness or injury which call for immediate medical attention.' In that opinion, the Attorney General pointed out that no hard and fast rule as to emergencies which would be applicable in all cases could be formulated, but, in the same opinion he stated, in effect, that emergency treatment is interpreted to mean temporary care given a sick or injured person until a legally licensed physician takes charge of the case, and should be limited to an act which is aimed to save the life of the individual or to alleviate suffering pending the arrival of a physician.

"Obviously, the interpretation precludes the following services by a nurse or technician (cited for purposes of illustration) unless services are rendered under the personal supervision of a physician: Suturing cuts, removing foreign body from the eye under anesthetic, routine treatment of burns, prescribing, dispensing or administering for colds, boils, headache, dysentery, stomach disorders, skin diseases, sunburn, etc. Such services are not services performed in cases of emergency and the person rendering them is engaged in the practice of medicine.

5. Rendition of services, which technically and legally are medical services, by a nurse of technician unless a licensed physician is present and directly supervising such services, or such services are authorized by the attending physician, is a violation of the spirit of the Ohio Workmen's Compensation Act and contrary to a standing regulation of the State Industrial Commission which, in effect, states that medical care of injured workmen must be rendered under the personal supervision of the attending physician and for which he is at all times responsible. That regulation precludes the payment of fees from the Workmen's Compensation Fund to a physician for services unless such services are rendered by him or under his direct, personal supervision, indicating quite clearly that a physician has definite responsibilities toward his patients which cannot be delegated.

6. Encroachment upon the practice of medicine by an unlicensed person constitutes a definite legal hazard for such person. He or she may be prosecuted for violation of the Medical Practice Act. In addition, such person, or his or her employer, runs the risk of being sued for damages for negligent treatment at the hands of an incompetent and unlicensed individual.

"Nurses employed by industrial plants and mercantile establishments can and do render indispensable assistance to physicians in their efforts to rehabilitate disabled employees and return them once more to gainful employment.

"However, the factory and store nurse—the nurse in private practice for that matter—should realize: (1) There is a definite line of demarcation between what constitutes the practice of nursing and the practice of medicine. (2) Even the graduate nurse who possesses much scientific education and training is not qualified to render unsupervised medical service. (3) The scope of the nursing profession is limited and the nurse should not exceed her rights. (4) The nurse who encroaches upon the practice of medicine exposes herself to criminal prosecution and civil litigation.

Industrial Injuries

—New Trends in Treatment—

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NEW TRENDS in the treatment of industrial injuries incline toward conservatism and a greater consideration of physiological principles. This has resulted in improved care. But the primary concern should be prevention and control of injury and disease. The means of accomplishment are through safety educational programs in industry regarding safe practices and the use of protective equipment. A good work environment is essential. Good vision, proper nutrition, and the avoidance of fatigue are requisites for the worker. Physical examinations and medical supervision are also of importance in the program.

Psychological Aid

IN MINISTERING to the injured workman it is not enough to bind his wounds according to the modern precepts of first aid. Psychological aid[1] is just as essential. The "company doctor" or "insurance doctor" of the old days is a spectre which must still be dealt with. In approaching the injured person, one must gain his confidence through words of reassurance and sympathy and by one's own composure. Recovery will be hastened by gentleness of handling the patient as well as by gentleness in handling the wound. Keeping him quiet in the first aid room, rather than rushing him to the doctor's office or to the hospital will do much to allay his mental anguish. In most instances, it would be better for the attendant to seek the doctor's advice over the telephone or to have the doctor go to the patient.

Eyes

ARC FLASH conjunctivitis is a condition quite prevalent among electric arc welders.[2] It is caused by exposure to ultra-violet or actinic rays and is characterized by delayed onset, self-limited course of 24 hours, swelling of the lids, photophobia, and sandy feeling in the eyes. Prevention is effected through educational pamphlets and personal instruction in protection through flash goggles with side pieces, helmets, welding clothing, and screens. Active treatment consists of keeping the patient in a darkened room or having him wear dark glasses, cold applications to the eyes, a local anesthetic in water solution as butyn or pontocaine for immediate relief, and in ointment base as butyn or holocaine at night while attempting to sleep, and a vasoconstrictive drug as adrenalin. Analgesics and sedatives may be required in severe cases.

Wounds

TO GUARD against infection and promote primary healing is the objective in the treatment of

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wounds. The broken skin admits bacteria and it was found that it takes about six hours for them to multiply and invade the tissues. Thus it is seen that prompt care is of the essence if bacterial invasion is to be prevented.

The simple abrasion is cleansed and an antiseptic, such as mild tincture of iodine is applied, covering with a sterile dressing.

The small incised wound is cleansed with white soap and water and the edges are brought together with flamed tape, small skin clips, or non-absorbable sutures, whichever is indicated.

The contused, lacerated and penetrating wounds may be more extensive and may be complicated by the entrance of the wound into tendons, muscles, joints, or to fractured bones. These wounds are cleansed thoroughly with a mild soap and water. The operator should be capped and masked and wear sterile gloves and gown. Irrigation with sterile saline solution follows the soap and water cleansing. All torn, ragged and damaged tissue is excised and bleeding is controlled.

The extent of debridement should be to the point where the tissue looks normal, bleeds freely, and the muscle fibres contract. Tendons, nerves, and large blood vessels must be spared. This repair is done within the six-hour period. The wound may be closed by primary suture and covered with a copious fluffed gauze pressure bandage. If the "golden period" has passed, non-absorbable sutures are inserted and the wound is packed with sterile gauze. The pack is removed in three days and the sutures tied. This is called closure by secondary suture. The consensus is that sulfanilamide should be powdered into the wound, using from three to 10 grams.[3] Where tendons and nerves are severed, they should be sutured, enlarging the wound if necessary. Fine silk suture material is used. Early passive motion after tendon suture tends to give the best results.[4]

Foreign bodies should be removed if they are accessible. Otherwise, they should be left undisturbed if the search would be prolonged and mutilating. The "Locator," an electro-magnetic induction apparatus, has been used in determining the surface location and surface depth and has proved of value in the removal of foreign bodies.[5]

Anti-tetanic serum should be administered in cases contaminated with street dust and for massive wounds anti-gas gangrene serum should be given.

Fractures

IN INDUSTRY fractures occur most frequently in the hands and feet. The only means of ruling them out is by x-ray which should be used frequently wherever there is the slightest doubt. The fingers are most frequently involved and they are best treated in flexion with early motion to prevent stiffness. In the foot the phalanges are most frequently involved. They are treated by strapping to the adjacent toe, inserting a piece of cotton between the toes. For metatarsal fractures the use of a transverse metatarsal bar is very effective.[6] This hardwood bar is placed under the sole of the shoe 1½ in. in front of the heel and retained by flat-topped screws drilled through the inside of the shoe. The bar must be high enough so that the ball of the foot will not come in contact with the floor. One must wait about 10 days or until the swelling has subsided to a point where the patient can put on a shoe.

In fracture of the long bones the various types of accepted treatment are classified as open reduction and internal fixation, skeletal traction, plaster cast immobilization, and external fixation. The latter is accomplished by means of fixation pins placed above and below the fracture or the fixation and reduction splint, and has been used with satisfactory results in fractures of the tibia and fibula.[7]

In compound fractures the trend is toward the modified Orr treatment. After careful debridement of the wound and proper reduction of the fracture, sulfanilamide is placed in the wound and 15 grains of sulfa drug are given every four hours for three days thereafter. The wound is packed open and the fracture completely immobilized with a plaster cast. Little or no treatment is required until the cast is changed four to six weeks later.[3]

Burns

MINOR burns are apt to heal in less than a week no matter what preparation is applied. In a statistical study of minor industrial burns occurring in a group of about 250,000 employees the recommended treatment consisted of washing the area with white soap and water, leaving the blisters unbroken and "undebrided," covering with fine mesh gauze impregnated with petrolatum or 5% boric acid ointment and applying a firm dressing over this, bulky enough to keep dirt away but not too large to keep the man off his job.[8]

In extensive burns first aid consists of covering the burn with a sterile towel or gauze moistened with soda solution. Pain is controlled by the hypodermic administration of ½ grain of morphine. Shock may have to be combatted. Further care consists of cleansing gently with plain white soap and sterile water as described under "Wounds." The soap is removed by rinsing with sterile saline solution. Fine mesh gauze is impregnated with sterile vaseline or 5% boric acid ointment and this is applied to the burned area, followed by pressure dressings. Blood plasma and oxygen may be required. General anesthesia should be avoided.

After the slough is removed, which takes from 10 to 14 days, the denuded area may require skin grafting. This is usually effected by means of small deep skin grafts which are covered by vaseline or moist fluffed gauze and an Ace bandage.

Traumatic Shock

THE treatment of shock is dependent on the various types of injury which it may follow.[9] More than one factor may be present, shock being due to crushing injury or hemorrhage which may accompany the injury.

The treatment of shock following hemorrhage is blood transfusion given as quickly as possible and in adequate amounts.

In shock following burns the treatment is blood plasma given in amounts of from 200 cc. to 500 cc. every hour and from 1,000 cc. to 5,000 cc. for 24 hours, depending on the severity of the shock. This and the withholding of water oppose the concentration of the blood, and have been successful in the treatment of burn shock.[10] Good results have been reported in the experimental treatment of burn shock in animals by means of liver extract injections and the intra-peritoneal administration of large quantities of saline solution.[11] It is the consensus, however, that shock due to burns is most responsive to the administration of plasma.

In shock following crushing injuries there is a loss of serum and plasma into the tissues and the treatment is the administration of plasma.

The treatment of shock following injury to the soft parts is whole blood or plasma to replace that which is lost as a result of the condition.

The practice of overheating patients in shock has been found harmful.[12] Experimental studies on the effect of various external tem-

peratures in shocked animals revealed that cold and heat proved dangerous to life. There is a loss of energy to the shock victim at a time when he needs every bit of it to keep alive. He will do best if wrapped in blankets and kept comfortably warm at room temperature.

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Management's Role in Industrial Nursing

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THE NURSE'S participation in the industrial health program is governed primarily by management's policy toward the health program and industrial hygiene services as a whole. Whether the nurse may exercise her professional knowledge as a teacher, and her initiative, depends upon the attitude of industry's leaders and the extent to which medical and safety services are practiced.

That there is need for health services in industry is undisputed. With the largest labor force we have ever known—some 54,000,000 workers—and the necessity of producing goods to the limit of our capacity, it is clear that industrial hygiene services have a major responsibility in the maintenance of physical fitness of all workers.

Aside from the unprecedented number of workers, the industrial hygienists' task has been made even more urgent by the material change in the make up of the labor force itself—a change brought about by the increased employment of women on "men's jobs," the employment of young people, the aged and the handicapped. This altered labor force, the speed-up associated with all-out production, longer hours of work, and increased exposure of workers to hazardous materials have augmented the task and have made the services of the professional nurse indispensable.

The care of injured or ill workers requires the skills associated with clinical nursing, and, since modern industrial medical practice covers health conservation and health promotion, it follows that health supervision and health education by the nurse must also be provided. It is incumbent upon management to see that workers are so protected.

In general, the function of the nurse in an industrial organization is encompassed in the following eight activities: (1) Management and maintenance of the plant medical department; (2) nursing care of occupational injuries and illnesses; (3) emergency care of nonoccupational illnesses; (4) assistance in medical examination program; (5) participation in health and safety education and accident control; (6) assistance with environmental sanitation programs; (7) participation in plant welfare programs; and, at times, (8) nursing services to ill or injured workers in their homes.

While this enumeration covers the varied duties and responsibilities which may be given the nurse, her scope of action and effectiveness are governed by the policies and attitudes of industrial management. Let us examine the actual status of the nurse in the industrial field and find, if we can, to what extent she is permitted to take her part in this all important activity.

Maintenance of Medical Dept.

MANAGEMENT and maintenance of the plant medical department is the first function of the industrial nurse. The duties embrace such activities as care of the dispensary, the purchase of and preparation of supplies, the keeping of certain records and reports. It has been observed that in many plants the nurse is assigned duties unrelated to her profession, such as stenographic work, work in the canteen and on the switchboard, personnel work, making and checking payrolls, and photographing and finger-printing employees.

In keeping with the national effort to conserve nurse-power during the war emergency, it would seem that non-professional personnel should be employed in so far as possible to perform these duties leaving the nurse free to devote her entire time to the health program. It has been demonstrated in practice that a plant employing as few as 100 workers can profitably employ a nurse full time on strictly nursing activities.

On the other hand, in some instances we know that other departments in a plant carry on health functions which should be delegated to the nurse. Here again, if management had a clear concept of the value of the medical program, all medical functions would be delegated to that department and the non-medical assignments made to other personnel.

Treatment

NURSING treatment and care of occupational injuries and illnesses and emergency care of non-occupational illnesses is carried on by practically all nurses today. Generally, in plants where a full-time physician is employed, the nurse's responsibility is limited to assisting the physician or to the care of workers who do not need his attention. On the other hand, in plants employing physicians part time or on call, the nurse sees all workers who are injured or ill, and exercises judgment relative to medical treatment. Seventy-seven percent of the industrial nurses are known to be employed in plants where the physician serves part time or on call, so it is evident that nurses must assume considerable responsibility. For this reason it is imperative that suitable instructions in the form of written standing orders should be provided by the part time or on call physician to insure service during his absence. Standing orders are a protection to the nurse, to the worker, and to management; and it is management's responsibility to see that the nurse secures such orders. We know that very few plants provide written standing orders for nurses, so that there is no question that something should be done to correct this deficiency. If no one physician is responsible for the plant medical service, the nurse may secure standing orders from the committee on industrial health of the county medical society. Such orders have recently been prepared and published by the Council on Industrial Health of the American Medical Association. Further, the nurse working under the direction of a full time physician should have

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written procedures for her guidance. In those plants where non-professional workers are employed, written standing orders and procedures should be furnished for their guidance also.

An important function closely connected with emergency treatment and care is the keeping of records and the preparation of reports. We know that all nurses keep records of treatments; some of these are complete while others are far from complete, depending again on the requirements of management and the nurse's own knowledge of such matters. Records and reports are to the industrial nurse what bookkeeping is to the accountant. They make it possible for her to prove to management the desirability and value derived from her service. It is important that individual medical records be kept strictly confidential, except as interpretations of them are needed by management. All such records should be kept in the medical department so as to be available for use each time the worker presents himself for care; and when physical examinations of workers are made outside the plant, the records or copies thereof should be made available to the nurse. *Clerical assistance* should be provided in order to conserve the nurse's time and maintain adequate records. Moreover, certain specific types of records and reports should be required in order to give management a complete picture of what goes on in the medical department.

Assistance with Examinations

ANOTHER major activity of the industrial nurse is assistance with medical examinations of workers. Although it would seem that a high percentage of nurses assist with medical examinations, such assistance is frequently limited in extent. A greater utilization of nursing skills in the physical examination would provide more adequate health services. For example, the nurse's assistance may aid the physician in securing the patient's understanding and cooperation, both in carrying out the recommendations made as a result of the examination, and in continued use of the medical service. And, of course, her assistance will conserve the physician's time.

It would seem reasonable, then, that nursing assistance in the medical examination should include interviewing the worker prior to the examination; performing routine tests and explaining their significance; taking specimens for serologic examinations and explaining their meaning; interpreting to the worker plant policies regarding health and welfare, and his responsibility for cooperating; making periodic inspections for symptoms and indications of occupational diseases; and making inspections and interviewing the worker in connection with return-to-work permits. Obviously, in many instances the nurse will require special technical training. Furthermore, the volume of such work required and the attitude of management toward the employment of technicians will govern largely the nurse's participation in these activities. Here again, management, with the help of the medical department, has a definite responsibility to define the exact duties to be performed and decide whether or not non-nursing personnel should be employed for certain technical functions associated with physical examinations in the interest of conserving nurse time.

Health Education

THE urgency of the war program has focused attention on the need of health education of workers. Although the nurse's opportunity in this field are unlimited, we know that nurses participate very little in health education programs in most plants.

It is in this particular field that management can exert influence which will have noticeable effect on the conservation of the health of workers, the improvement of their efficiency and reduction of absenteeism, all factors vital to production. Management should see to it that a continuous program for the health education and supervision of workers exists comparable to programs in the field of safety education and accident prevention.

A broadly planned health education program is needed to reach all workers throughout the plant, and this should be worked out in cooperation with the personnel department. Health talks and film showings might be arranged, articles prepared for the employee publication, and health posters placed on all bulletin boards. The training programs now being so well perfected offer an excellent opportunity for presenting a discussion of the plant's health program. Booklets describing the company's policies to new employees and those especially designed for women employees are other devices which the nurse can encourage and help prepare. Another important activity which the nurse could carry on is the teaching of formal classes on subjects such as home nursing and first aid.

Individual health supervision should be carried on routinely by the nurse in the follow-up for correction of remediable conditions and in the maintenance of complete records showing care given for non-occupational conditions. In fulfilling these responsibilities, the nurse makes the best possible utilization of community resources, including private physicians and health and welfare agencies.

Safety and Sanitation

WE HAVE observed that invariably, where health programs are either at a minimum or undeveloped, the nurse turns to safety work. The amount and character of the nurse's participation in safety education and accident prevention programs is probably due, in a large measure, to the fact that provision is made through plant policy for such programs and that state laws and insurance companies require adequate and complete records of compensable occupational disabilities, which are kept by the nurse as a rule. Thus, nurses take an active part in the plant safety programs, and, although it is conceded that many of the nurse's functions in this field are not essential nursing functions, certainly one would not discourage this work, since it contributes to the reduction in the frequency and severity of accidents. However, management should not hold the nurse responsible for the planning or direction of the safety program, management should see to it, rather, that the nurse *assists*—that is, in the proper placement of workers according to their physical and mental fitness; participation in the training course and in safety committee work; in

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record and report keeping and individual instruction of workers; in group educational activities; and in the distribution and care of protective equipment.

In some establishments nurses assist with the plant sanitation program. Here, too, management should not insist that the nurse have direct responsibility for the supervision of plant sanitation. This function should be delegated to other departments in the plant But the nurse definitely should show an active interest in all phases of plant environment that affect the health and morale of the worker, and whenever possible should assist in this type of activity.

Welfare Programs

IT HAS been observed that in some plants workers avail themselves of the opportunity to discuss their personal problems with the plant nurse. The extent to which this is done, of course, depends on largely on the personality of the nurse herself. Some plants provide a special department to handle welfare problems, and the nurse refers such problems to that department. Nurses have a definite part to play, however, in the development of group sick benefit associations, hospitalization and life insurance plans; personal counseling regarding welfare problems; development of recreation programs; cooperation with local welfare agencies; and the planning of cafeteria luncheon and canteen services.

The use of counselors for women workers in industries employing large numbers of women has increased the opportunity for the nurse to cooperate in adjustment of personal problems. Counselors should refer personal health problems to the nurse, since counselors are generally not equipped by training or experience to give such advice. The nurse should have frequent contact with the counselors and establish good working relations with them. This applies as well to other members of the personnel department dealing with men workers and with the general personnel operations.

Home Visits

EXPERIENCE has shown that home nursing care for injured and ill workers aids in the promotion of general health, reduces absenteeism, and contributes to the morale of workers. These visits are primarily made for the purpose of giving health supervision, determining eligibility for benefits, ascertaining causes of absence, assisting the worker with his social problems, and sometimes giving nursing care to the ill or injured workers. This type of service is seldom rendered by the plant nurse. Several factors appear to make it more desirable for an industry to enter into a contract with a local visiting nurse association rather than to employ a nurse for home service. It is essential to avoid duplication of services, that is, duplication of activities already performed by a community agency. The advantage of having the community nurse serve all the plant for all home visits seems evident, inasmuch as she may already be serving the family, and therefore is in a position to contribute her knowledge of family health problems to the industrial medical department. Of course, where community resources are not available, or cannot be reconciled with company policy, it may be necessary for the plant to employ its own nurse for home visiting.

Supervision

NURSING supervision has a considerable influence on the extent and character of the in-plant program. Such supervision, of course is possible in a plant which has a full-time physician or in which several nurses are employed and one is designated as director of the nursing service. However, when the nursing staff of a plant is not sufficiently large to warrant the employment of a nursing supervisor there are other facilities available to the nurse for advisory assistance. At the present time, nursing consultation services are available through some 28 consulting nurses in 22 state or local divisions of industrial hygiene. In addition, many of the larger insurance companies provide nursing consultation services to their clients. Planned meetings of the personnel of the medical department for the discussion of current problems would also help, just as meetings of other departments are necessary for efficient plant operation. Management should provide a small library containing books, pamphlets and reprints relating to specific problems in the particular type of plant, as well as to the general field of industrial hygiene. Such a library should subscribe to professional journals, including periodicals issued by nursing organizations. The nurse's effectiveness, too, will be greatly aided by a liberal policy on the part of management in providing for the nurse's attendance at professional meetings such as this one. The nurse should also be given the opportunity to participate in community planning to meet such present day needs as the care of children of working mothers, recreation for workers on swing and night shifts, and related problems.

Management should carefully consider the scope of the duties the nurse will be expected to perform in relation to the industry's total health program. These duties will vary in different types and sizes of industries. Realizing these variables, management is then in a position to determine what preparation and experience are necessary to enable the nurse to carry on the program. This is essential, since the lack of uniformity in industrial health programs is responsible for the lack of uniformity in the scope and extent of nursing activities. Nurses are usually willing to try their hand in various phases of the health program, but are limited at times by managements insistence that they confine their functions to first aid work; it is important therefore, that management understand the program, then choose well-qualified nurses for the job, and see to it that their salaries are commensurate with their responsibilities.

In order that she may be able to meet these responsibilities successfully, the nurse will need to have certain preparation and personal qualifications. Today, opportunities for special training in industrial nursing are increasing. On the whole, nurses who are now entering industry have more opportunity for better professional preparation than those who entered this field several years ago.

The shortage of physicians and nurses places a great burden on those nurses now serving in industry, since they find themselves in a dual capacity of aiding in the treatment and care of industrial injuries and diseases and at times also concerned with non-industrial injuries and illnesses. In many communities, the plant is the only place where such care can be provided. This fact makes it even more imperative that the nurse be well prepared professionally for her duties. Management should make it possible for the nurse to obtain such training, and should encourage the nurse to belong to professional organizations and to attend their conferences.

If management has a clear understanding of the most effective type of industrial health program and also had definite policies and standards regarding the duties of nurses in industry, then one can depend upon the nurse to fulfill in a creditable manner all responsibilities assigned to her.

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